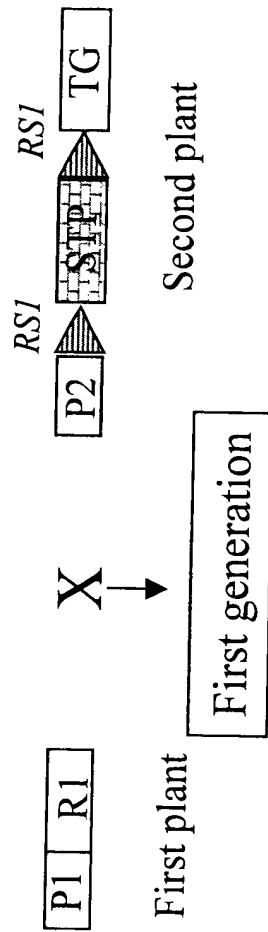
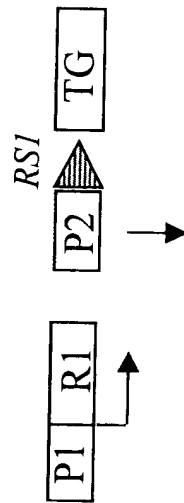


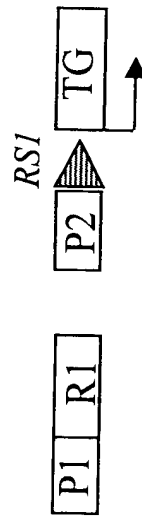
FIGURE 1



Stage 1: R1 recombinease expression occurs under promoter (P1) primes trait gene (TG)

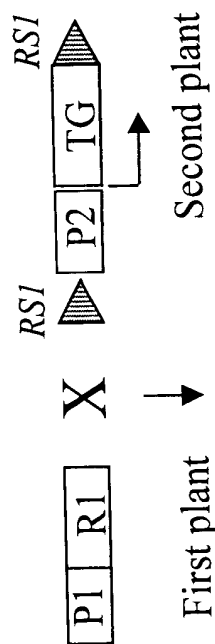


Stage 2: TG expression occurs under P2 promoter, e.g. mature leaf promoter

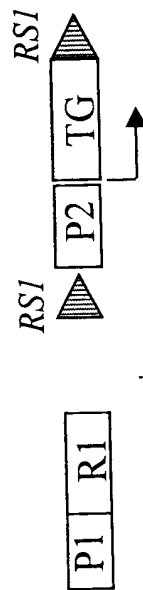


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FIGURE 2



Stage 1: Trait expression occurs under promoter P2



Stage 2: R1 recombinase expression occurs under male or floral common germline promoter (P1) removes trait gene from pollen or progeny seed of first generation, respectively.

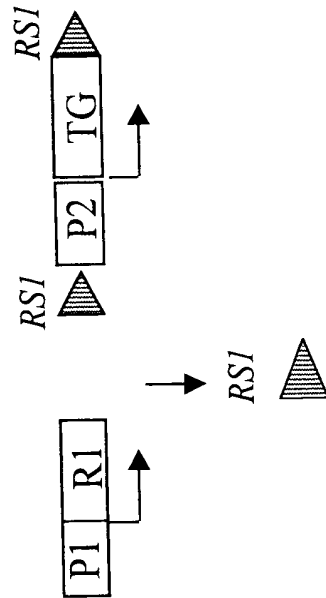


FIGURE 3

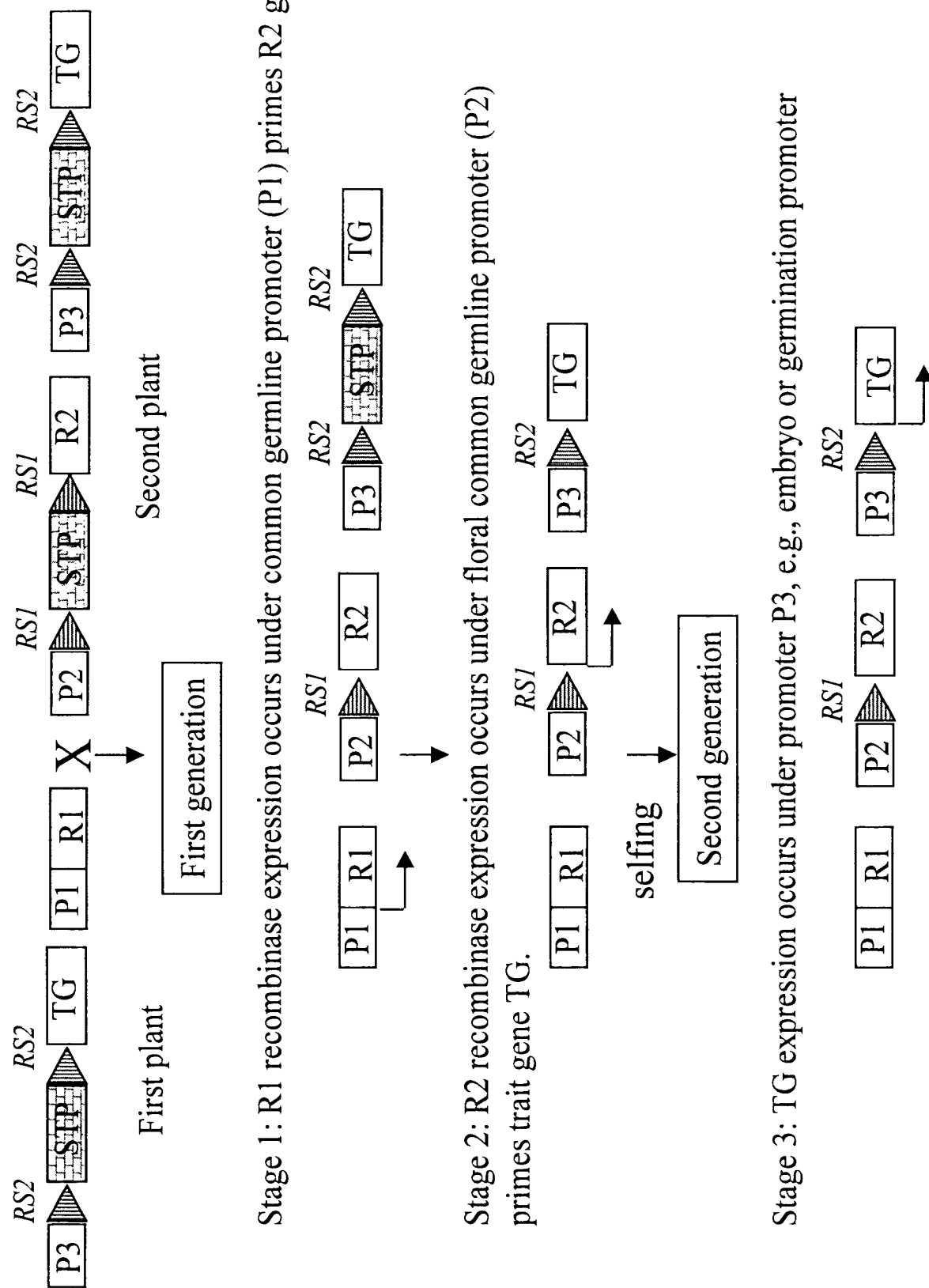


FIGURE 4

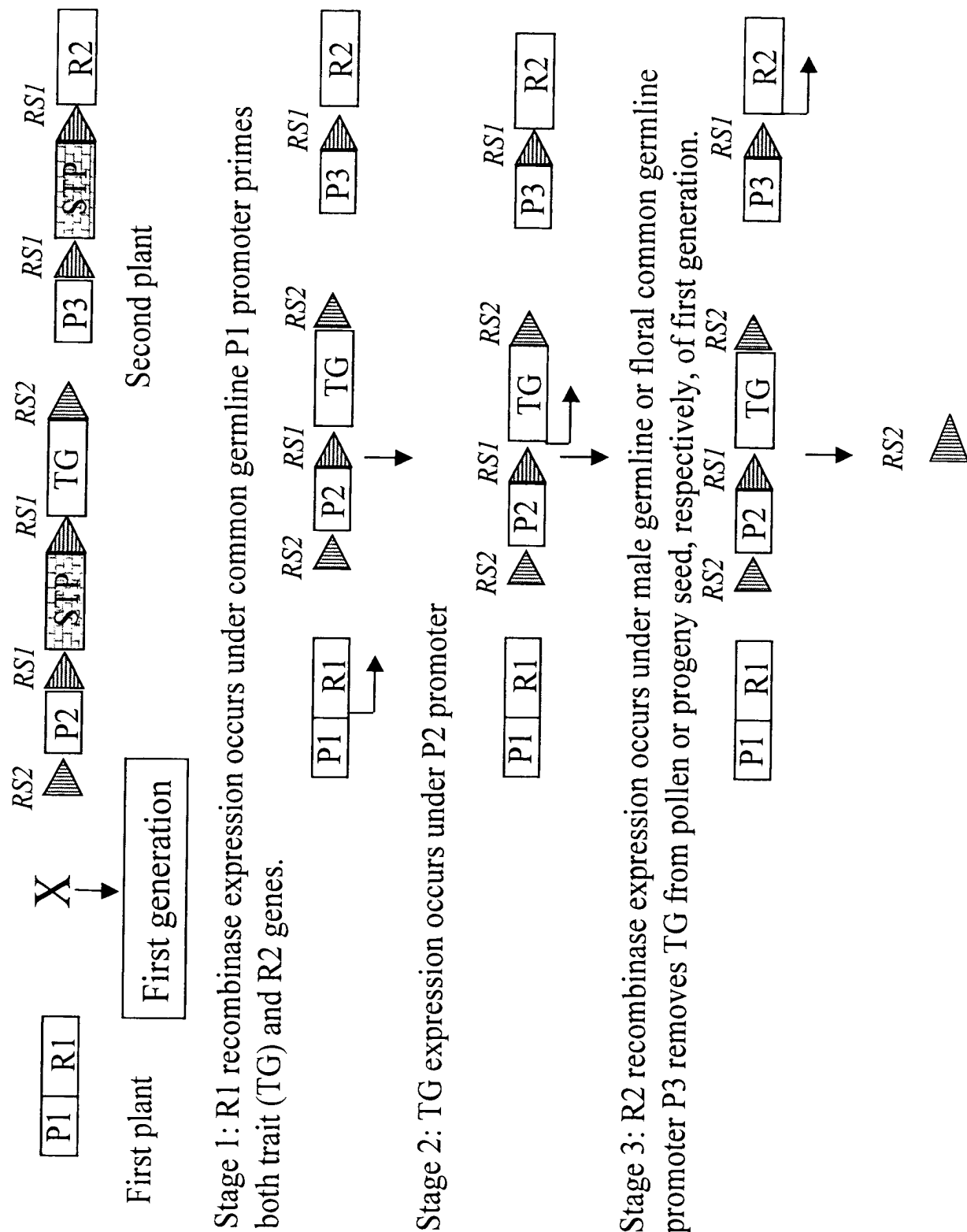
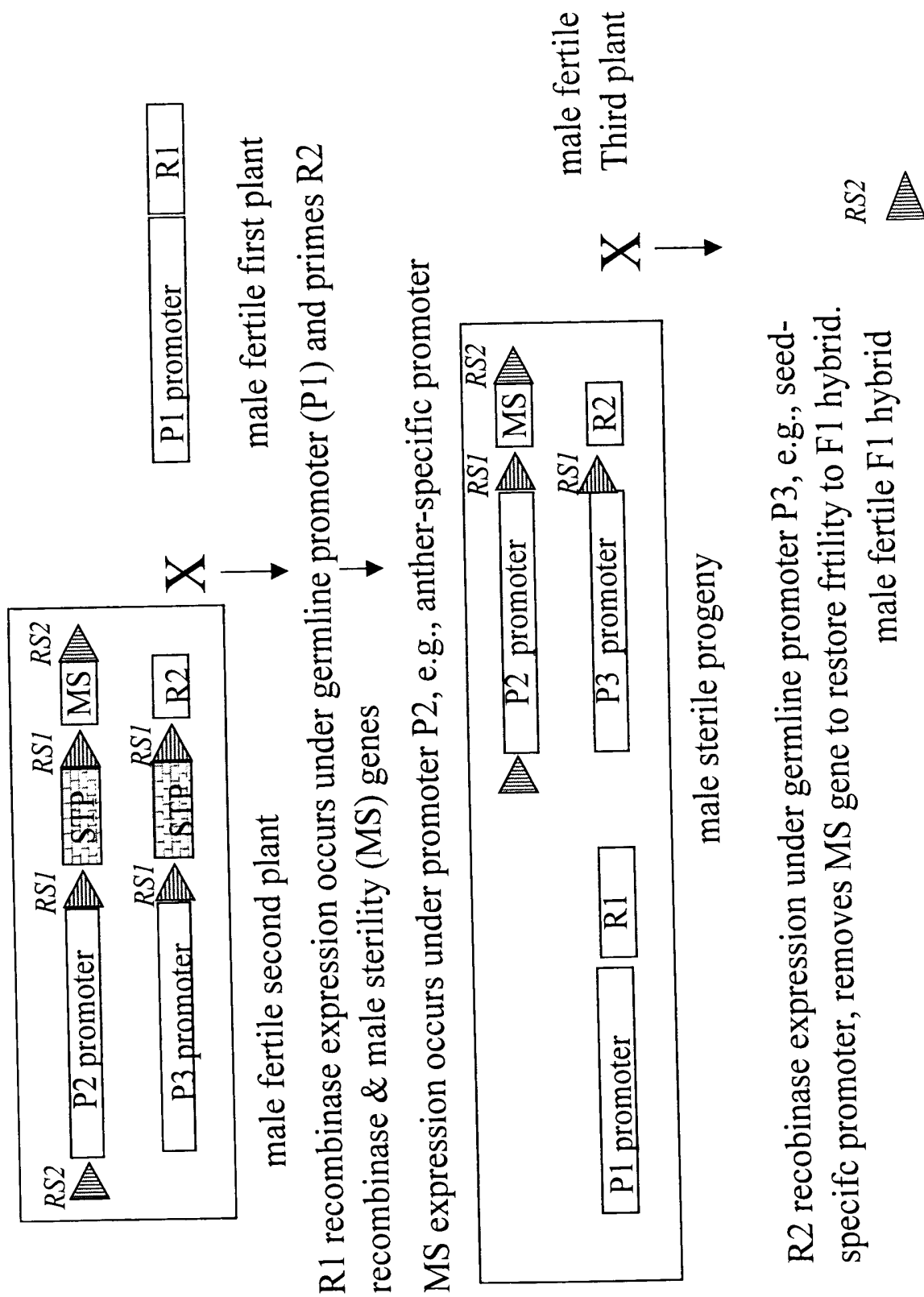
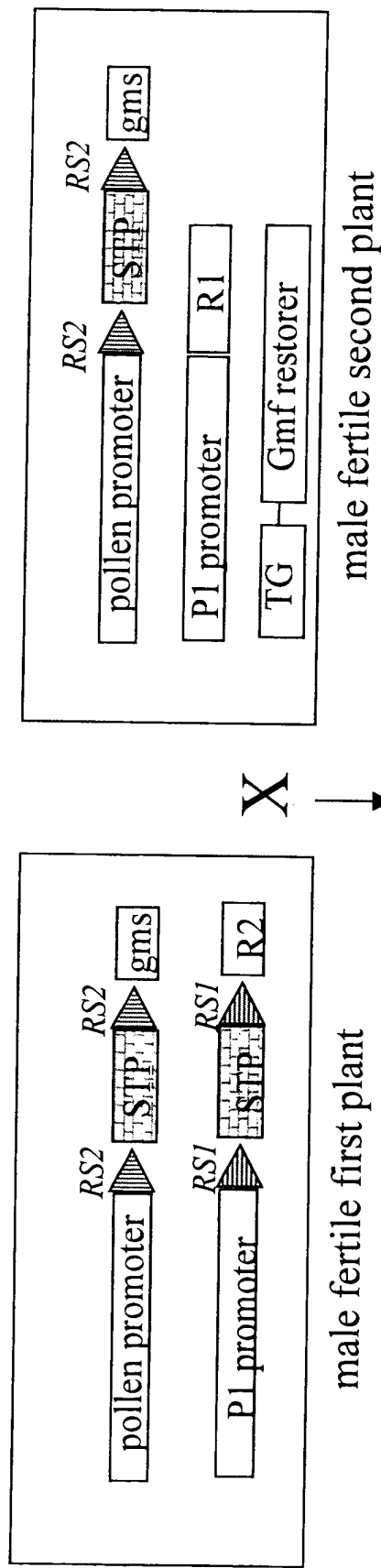


FIGURE 5



R2 recombinease expression under germline promoter P3, e.g., seed-specific promoter, removes MS gene to restore fertility to F1 hybrid.  
male fertile F1 hybrid

FIGURE 6



R1 recombinase expression under germline promoter P1 primes R2 recombinase gene.

R2 expression under germline promoter P1 primes gametophytic male sterility (gms) gene

Gms expression under pollen specific promoter leads to sterility in pollen without Trait (TG) and gametophytic male fertility (gmf) restorer gene

selfing

TG is inherited in all second generation grain

FIGURE 7

